



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/033,044

12/26/2001

Hugh Barrass

062891.0633

8602

5073

7590

03/03/2006

BAKER BOTTS L.L.P.

2001 ROSS AVENUE

SUITE 600

DALLAS, TX 75201-2980

EXAMINER

BLOUNT, STEVEN

ART UNIT

PAPER NUMBER

2668

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/033,044	Applicant(s) BARRASS ET AL.	
	Examiner Steven Blount	Art Unit 2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 - 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of the independent claims, the term "a first line communicating a first signal" is indefinite, as the line does not communicate the signal, but the end users do.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 4, 6, 10 – 16, 20 – 23, 25, 29 – 32, and 36 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 5,887,032 to Cioffi.

With regard to claim 1, Cioffi discusses the problems associated with a VDSL system when twisted pair lines induce electromagnetic interference on each other. See col 2 lines 63+. Cioffi teaches the solution to this problem to comprise using an adaptive filter for producing a crosstalk cancellation signal based on coupling coefficients.

Further, Cioffi teaches, in col 8 lines 50+ and col 10 lines 60+ and col 11 lines 18+, detecting crosstalk on oppositely directed transmission lines (see figures 2 and 5) and determining the phase of the crosstalk on the first line and "communicating the first signal on the first line in response to the phase" (col 11, lines 18 – 23).

Coffi also teaches the crosstalk to occur in the near end in figure 1, member 122.

The examiner notes that although Cioffi teaches VDSL and ADSL, and not strictly DSL as claimed, these are obvious variations of DSL which would have been obvious to one of ordinary skill in the art at the time of the invention.

With regard to claim 2, this would be obvious in view of the circular shifting process described in col 9 lines 2+.

With regard to claim 3, pulses are used to implement the signal data in figure 2.

With regard to claim 4, see col 11 lines 18 – 23.

With regard to claim 6, this process would be obvious to carry out on a third line after a second line.

With regard to claim 10, see the discussion of twisted pair above.

With regard to claim 11, although TDD is not explicitly mentioned, the examiner takes Official Notice that DSL is commonly implemented using TDD.

With regard to claim 12, see the above, and note that ending the call in view of the interference would be obvious in view of the fact that people often end a call when there is too much interference.

With regard to claim 13, see the rejection of claim 1 above and note that the synchronization process is discussed in col 11 lines 18 – 23.

With regard to claims 14 – 16, see the rejections above where all the limitations are addressed.

With regard to claim 20, see the rejection of claim 1 above and note that the claimed detector is the equivalent of member 400 generally (see fig 4), and the control unit corresponds with member 412 in this figure as well.

With regard to claims 21 – 23, see the rejections above where all the limitations are addressed.

With regard to claims 25, see the rejections above and note that the above would discussion would make obvious the application to the device to a third line as well.

With regard to claims 29 – 32, see the rejections above and note that the members shown in figure 4 are comprised of "logic encoded in media".

With regard to claim 36, the examiner notes that the means described in the specification are taught in Cioffi as described above.

5. Claims 5, 7 – 9, 17 – 19, 24, 26 – 28, 33 - 35 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 5,887,043 to Cioffi as applied above, and further in view of U.S. patent 6,807,236 to Fujimura.

Cioffi teaches the invention as described above, but does not teach the use of a control pulse/signal. Fujimura teaches the use of a trigger signal 13 operational with a phase shifter 203 as described in col 5 lines 4+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Cioffi with a control pulse/signal in light of the teachings of

Fujimura in order to control the phase of the first signal such that the interference is minimized.

6. The examiner notes that “communicating the first signal” (as amended) as opposed to communicating “a first signal” (as previously presented) is the major change of scope in claim 1. The examiner disagrees with the applicant that there is no reasonable expectation of success in combining Fujimura with Cioffi, as both are directed to eliminating crosstalk.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2661

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 571 - 272 - 3071. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chau Nguyen, can be reached on 571 - 272 - 3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB



2/27/06



ALPUS H. HSU
PRIMARY EXAMINER